CCTV Tester

User's Manual

Model: EX-TB2

Table of Contents

1， Safety Information

1.1 Precaution before using the tester

A. Make sure to read the user's manual before using the product.

B. Make sure to check the input and output range of voltage or current at every input and output ports before connecting, so that the system cannot be overloaded.

C. The following operational environment should be maintained constantly:

- Temperature: -30℃--- 70℃
- Relative humidity: 30% ~ 90%
- Recharging voltage: 9V ---12V

1.2 Precautions when using the tester

A. Do not use the tester in damp humidity or leaking gas environments.

B. Do not touch the tester with wet hands.

C. Be mindful not to shock or shake the tester while in use to avoid damage.

D. Avoid the places of strong magnetism or electric wave, which could cause incorrect measuring.

E. Be careful not to expose the ports or joints to dirt or liquid.

F. Do not disassemble the tester.

1.3 Precautions for battery charging and using

A. Use only original chargeable battery with the tester, when charge the batteries, please use the original power adapter.

B. Make sure not to disorient the polarization of batteries.

C. Do not short-circuit or disassemble batteries.

2， Introduction

2.1 Features and function

A. Video test

The video signal and the quality of picture can be tested.

B. PTZ controlling

It has the basic operational test of PTZ products, function include pan/tilt, zoom in/out, preset setting and operation, speed adjustment etc; support multi-protocol and baud rate, communication via RS-232, RS422 simplex and RS485 port.

RS485 protocol include: Pelco D,P, Samsung, Panasonic, Molynx. Additional Protocols may be added as per customer requests.

Baud rate include: 2400, 4800, 9600, 19200.

C. UTP cable test

The wiring condition (disconnected, short of UTP cable) can be tested and show in the screen clearly.

D. Video signal generating

It can output Green, white Black and Blue screen to allow technician to inspect video monitor or DVR. The generating signal support PAL or NTSC (don't support both meanwhile) format.

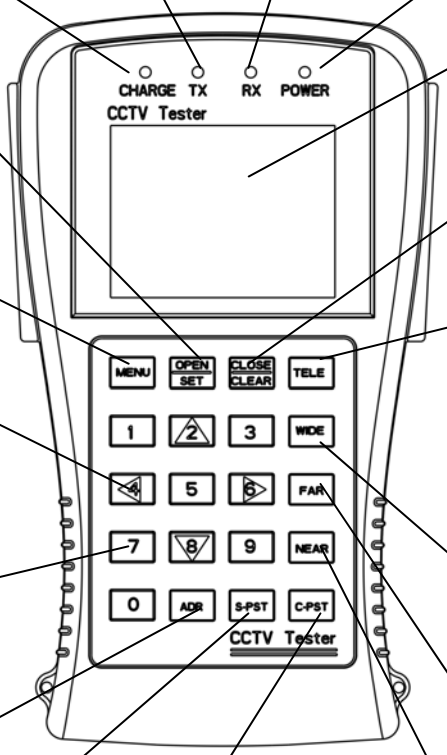
E. RS485 data test

It can test the RS485 data sent from controlling device, display the hexadecimal data content for engineer to analyze.

2.2 Standard items

Item	Quantity
CCTV tester	1
3.7V battery	2
UTP cable tester	1
Power adapter	1
RS485 connector	1
BNC connect cable	1
Test lead set	1
Necklace	1
User manual	1

2.3 Function of each part



Data Transmitting LED:
It lights when transmitting data.

Data Receiving LED:
It lights when receiving data.

Charge Indicating LED:
It is on when being charged.
Glitters when charge finish.

Power LED:
It is on when the tester is on.

Open & setup:
Open iris & setup the functions

2.5 inch LCD Screen:
960x240 resolution.

Close & clear:
Close Iris & clear the setup

Menu:
Long press back to main menu, display/hide sub-menu

Tele:
To zoom in the PTZ lens & send the generated video signal out to the display device.

Shift setup buttons::
Shifts up, down, right, left for PTZ & menus & others.

Wide:
To zoom out the PTZ lens & recalls the generated video signal.

0--9 num-buttons:
Input number when setup preset, call preset & PTZ ID

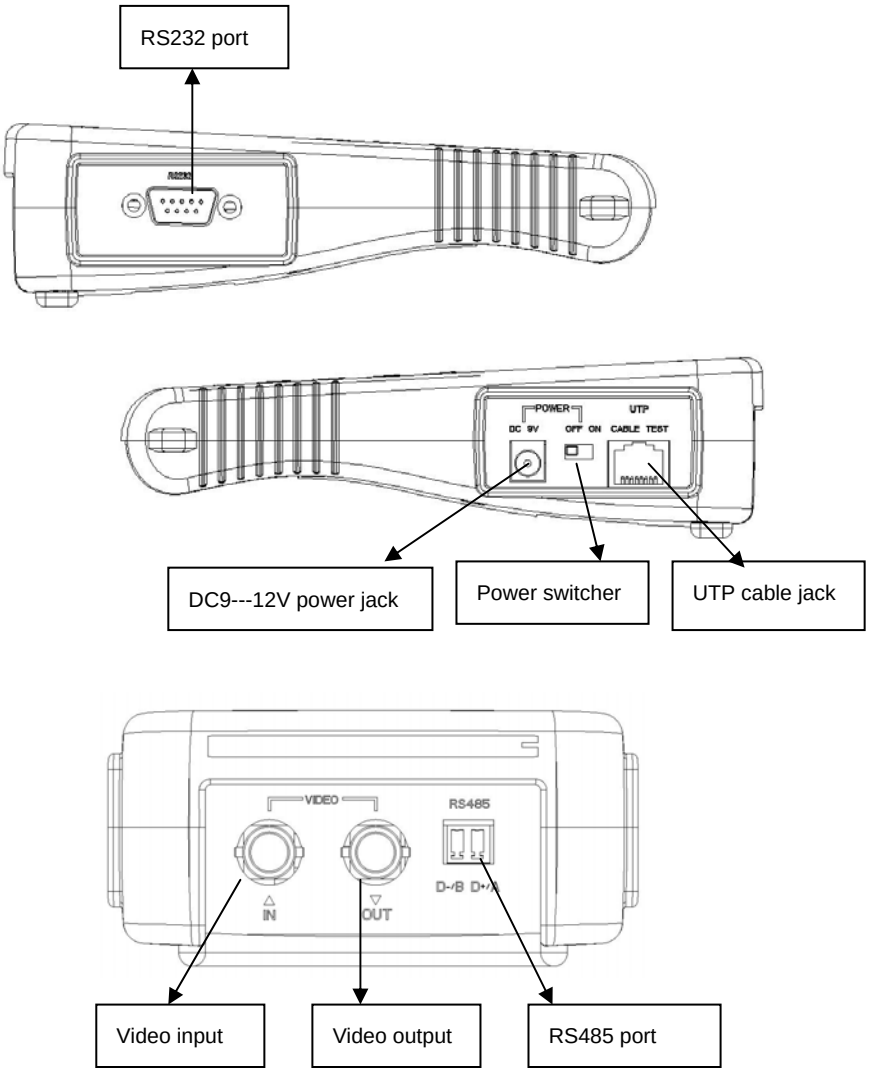
Far:
To adjust PTZ focus to far

Address:
Setup PTZ ID

Near:
To adjust PTZ focus to near

Set preset:
In PTZ mode，press to start to set preset

Call preset:
In PTZ mode，press to start to call preset

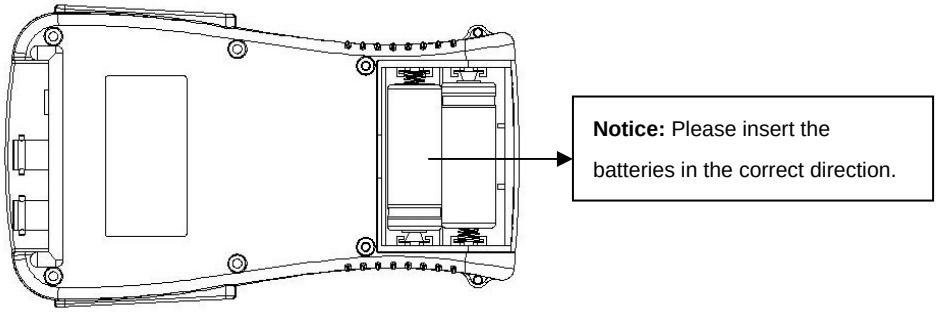

RS232 port
POWER
DC 9V
OFF ON
UTP
CABLE TEST
DC9---12V power jack
Power switcher
UTP cable jack
VIDEO
RS485
IN
OUT
D-/B D+/A
Video input
Video output
RS485 port
The position of the batteries.

2.4 Specification

Model	TB Series
Video Test	
Signal Mode	NTSC/PAL automatically suitable
Display	2.5 inch LCD screen, 960 x 240 resolution
Video Input	1 channel BNC
Video Output	1 channel BNC
PTZ Controlling	
Communication	RS232, RS422 simplex and RS485
Protocol	Pelco D, P; Samsung, Panasonic or customized
Baud Rate	2400,4800,9600,19200
Other Function	
Signal Generating	Output 1 channel video signal for testing monitor, PAL/NTSC selectable
UTP Cable Test	Test UTP cable connection state and display in the screen
RS485 Data Test	Test the RS485 data sent from controlling device
OSD Menu	English OSD menu, support multi-languages
Keyboard	New design with number buttons, easy to operation
Power	
Power Adapter	DC9V
Battery	2 pcs 18490 standard batteries 3.6V,capacity 1400mAh
Rechargeable	5 hours recharging time,work for 5 hours
Low Consumption	Sleeping mode,display battery power state
Other Parameters	
Work Temperature	-30^{o}C---+70^{o}C
Work Humidity	30%-90%
Dimension	170mm x 99mm x 48mm

3， Operation Introduction

3.1 Power and battery



A. The power slide switch is located at the side of the tester. Turn the power slide switch on to power on the tester, turn it off to power off the tester;

B. After the tester turning to sleeping mode, turn the slide switch on again to restart it;

C. The batteries should be plugged in over 5 hours for full charge, when charged the **Charge Indicating LED** will on, after full charging, the **Charge Indicating LED** light will glitter and the charging work can stop automatically.

D. The charged batteries can operate for 5 hours or more.

E. When the battery indicator in system information menu shows 25 (the status number includes 100, 90, 75, 50, 25, 5), please recharge it for use.

F. The tester can be used when it is being charged.

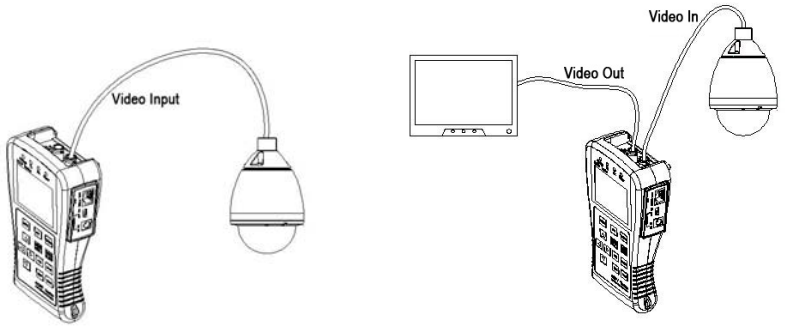
3.2 Main menu introduction

Turn on the device; you will see the main menu, as the following shows:

- 1-5 are five independent sub-menu;
- Press the corresponding number button to get into the sub-menu;
- Version number and S/N cant be edited;

1 SYSTEM SETUP	——>	System information
2 PTZ CONTROLLING	——>	PTZ controlling function
3 UTP TESTING	——>	UTP testing function
4 VIDEO GENERATING	——>	Video generating function
5 RS485 DATA ANALYZING	——>	RS485 protocol analyzing
VER:V1.09 S/N:08110910	——>	Software version and S/N

3.3 Video test



A. Connect the output terminal of video output system to the video input BNC of tester, turn on the tester, the video can be display on the screen.

B. Connect the video output BNC of tester to the video input of other display device, it can display the video signal generated by the tester or looped by tester.

3.4 System information sub-menu

A. Press **"1"** to switch to the system information sub-menu, as follows:

PROTOCOL	Pelco P	——>	PTZ protocol
COM	485	——>	Communication port in used
RATE	4800	——>	Baudrate: 2400/4800/9600/19200
SPEED	016	——>	Pan and tilt speed
IDLE TIME	000	——>	Idle time from last operation to auto turn off (minute)
BATTERY	090	——>	Battery power status: 100/90/75/50/25/5

B. Press **Set** button to start the set up:

C. Press num-button **"2"** and **"8"** (PTZ direction button **"UP"** and **"DOWN"**) to select the option; (Battery power status can be edited)

D. Press num-button **"2/6/8"** (PTZ direction button **"UP/DOWN/RIGHT"**) to adjust the parameter;

E. Press num-button **"4"** (PTZ direction button **"LEFT"**)to save and quit;

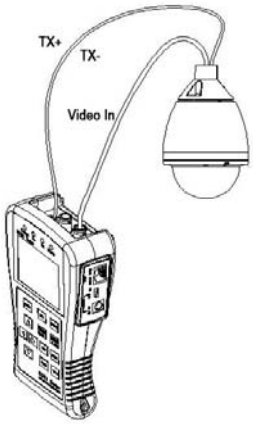
F. Press num-button **"4"** again to finish the setup situation, the characters in the menu will stop glitter;

G. Press **MENU** button for 1 second to back to the main menu.

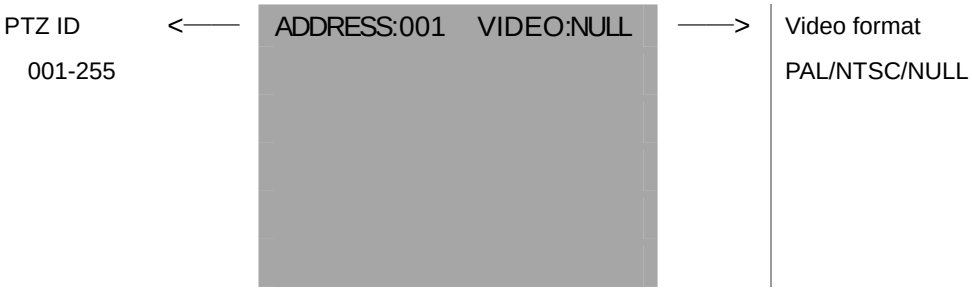
Note: In our device, PTZ there are 16 (some protocol ok has 7) levels for the PTZ, 0 means the minimum speed, 17 (or 7) means the maximum speed.

3.5 PTZ test

A. Connection



- Connect the tester with the PTZ camera as the picture shows.
- In the main menu, press num-button "**2"** to switch to the PTZ testing function sub-menu, as the following



B. Operation

- Press the **ADR** button, input the PTZ address by using num-button;
- Press the **SET** button to save the setup;
- Press the **MENU** button to hide the menu information and show a clean screen for camera image;
- Press **MENU** button for 1 second to back to the main menu.

C. PTZ controlling

When connect to the PTZ correctly, the camera image will displayed in the screen of the tester, after setup the proper protocol, baud rate and the ID of the PTZ, user can control the PTZ as the following method:

- Press **UP/DOWN/LEFT/RIGHT** to control the movement of the PTZ;
- Press **OPEN/CLOSE** to control the iris;
- Press **FAR/NEAR** to adjust the focus manually;
- Press **WIDE/TELE** to zoom in/out the camera lens.

D. Preset position

- Set up the preset position

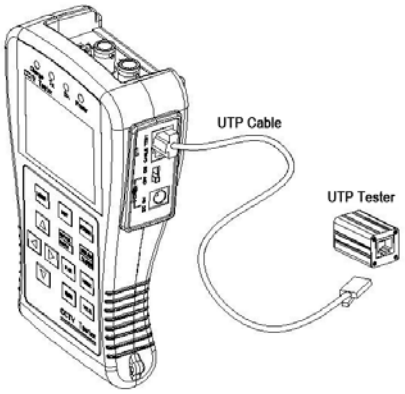
In the PTZ controlling mode, press **S-PST** button, then input the preset position number by the num-buttons, press **SET** to save the setup operation, user can use this method to set several preset positions one by one;

- Calling the preset position

  In the PTZ controlling mode, press the C-PST button, then input the preset position number by the num-buttons, press **SET** to save the setup operation, user can use this method to call several preset positions one by one;

3.6 UTP cable test

A. Connect the tester to the UTP cable tester as the picture shows:



B. In the main menu mode, press num-button **"3"** to switch to the UTP testing mode;

C. Press **Set** to start the test, UTP cable information will be displayed in the screen.

D. User can estimate the UTP cable connection situation from the information.

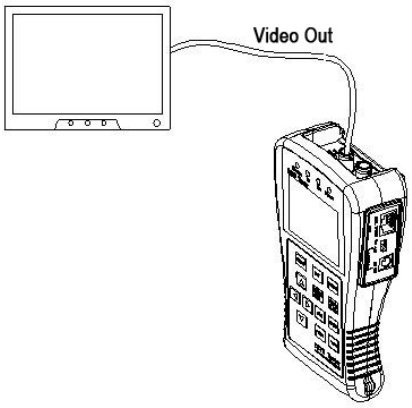
CCTV Tester side sequence		UTP CABLE TEST		
	<——	1 – – – – – – – 3	——>	UTP tester side sequence(double check)
		2 – – – – – – – 6		
		3 – – – – – – – 1		
		4 – – – – – – – 0	——>	"0" means open circuit
		5 – – – – – – – 0	——>	If there are 2 line show "0", it maybe: ● They open circuit separately; ● They short circuit to each other;
		6 – – – – – – – 2		
		7 – – – – – – – 7		
		8 – – – – – – – 8		

E. User can estimate the connect situation base on the information;

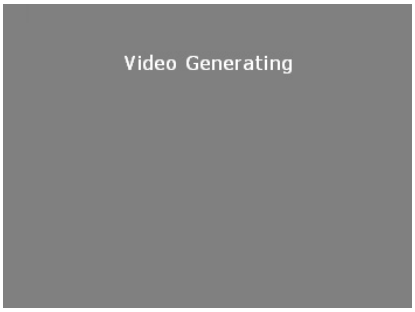
F. Press Menu button for 1 second to back to the main menu.

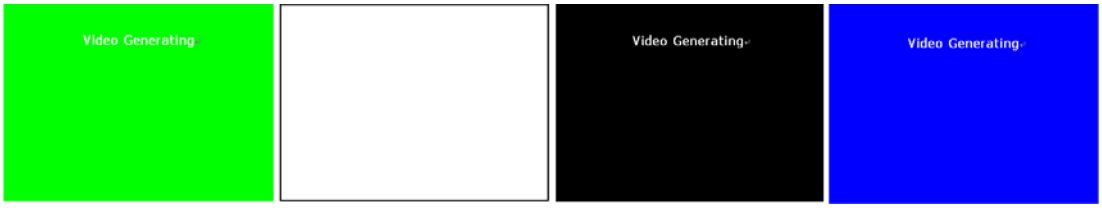
3.7 Video generating

A. Connect the tester to the displayer device as the picture shows:



B. Press **Mode** to switch to video generating menu as follows:





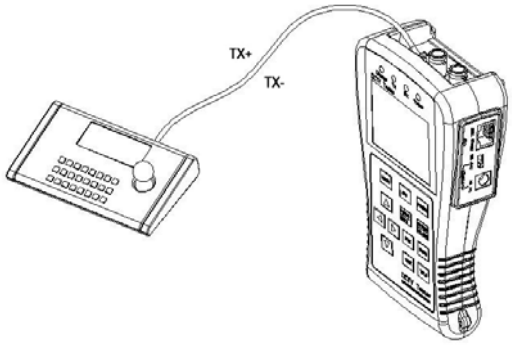
C. Operation setup

- Press the **Mode** to switch to the video generating mode
- Press **Set** to switch the video generating signal: Green, White, Black and Blue.
- Press **Tele** to send the generated video signal to the display device.
- Press **Wide** to recall the generated video signal.
- Press **Return** to finish the video generating operation.

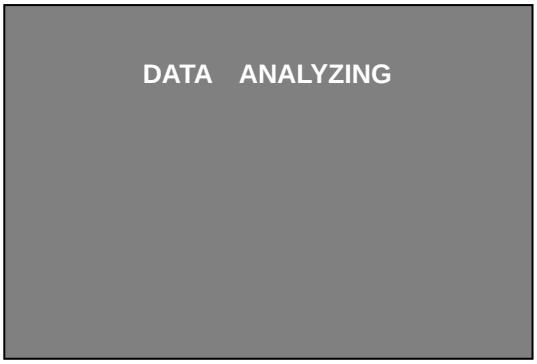
(Notice: If didn't press **Return** to finish the video generating operation mode, the Tester will couldn't be switch to other function mode**.)**

3.8 RS485 data test

A. Connect the tester to the controlling device as the picture shows:



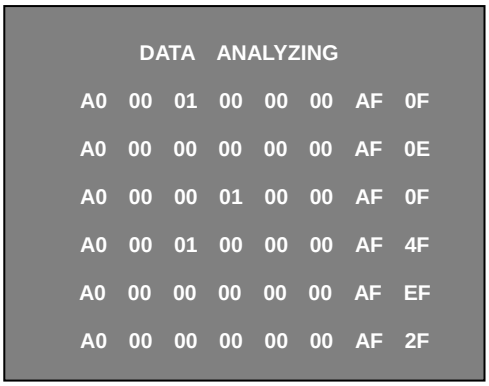
B. In the main menu, press num-button "5" to switch to the RS485 protocol analyzing mode, as follows:



C. Press **SET**to start the setup of baud rate.

D. Press **UP/DOWN** to select the tester's baud rate, make it same with the controlling device's. baud rate in using.

E. Make the controlling device transfer the RS485 data to the tester, the hexadecimal signal data will displayed in the screen as follows, engineer can analyze the data to know if the controlling device work with the correct protocol.



4，Warranty

4.1 Warranty items

Since the delivery day:

1) Exchanging service within 15 days from the receiving day, we responsible for the freight charge (battery exchanging service within 90 days from the receiving day).
2) Repairing service within 1 year, change accessories and repair for free, customers should responsible for the freight charge (repairing service don't include battery).
3) We provide whole life repairing service for our products with proper charge; customers should responsible for the freight charge.

4.2 Warranty exception

We provide repairing service with proper charge, customers responsible for the freight charge

1) Damage caused by abuse, unreasonable use, mistreatment, or neglect.
2) Damage caused by modification or repair not authorized by our company, working in hostile environments, or natural disaster.
3) Damage caused by improper or improperly used packaging, or other devices work in the same system.

4.3 Complemented items

1) Company is not responsible for other assurance and other derivative from capital loss: The product and the user guides are not assured for particular users and some special purpose of use.
2) If the products returning for exchanging was damaged, modified or miss accessory, we will charge the proper payment.
3) If the components are no longer produced during the warranty-limited period, company will make a decision to replace similar products at no charge.
4) Don't offer exchanging service for special design products by customers.